

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 03/10/2008 have been fully considered but they are not persuasive. Applicant argues that the Buchschacher reference and all the rest of the references used in previous office action don't teach the limitation that states "clock signal generating means for generating the clock signals, said control signal generating means keeping the clock signals in holding states during a holding period during operation, said holding states being equal to the states of the respective clock signals immediately before the holding state". Examiner respectfully disagrees with this argument because the Buchschacher reference teaches exactly what has been claimed. The clock signals are supplied by the control circuit (CNTRLG, Fig. 1) which is a signal generating means and the clock signals are kept in holding state in a capacitor (see col 2 lines 54-60).

Applicant's arguments, see page 10 of Applicant Arguments/Remarks, filed 03/10/2008, with respect to the rejection(s) of claim(s) 8 under Arimoto have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Miyagi et al. 5955687 (Miyagi hereinafter).

Claim Objections

2. Claim 17 is objected to because of the following informalities: On line 2 of claim 17, it reads "sand". Examiner took it as a misspelling of the word "said". Additionally, on

line 13, in the same claim it reads "control signal". It should be - - clock signal - - instead. Appropriate correction is required.

3. Claim 20 is objected to because of the following informalities: On line 3 of claim 20 there is an open bracket before the word "when". This needs to be deleted. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 24, 25 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly claim the subject matter which applicant regards as the invention.

Regarding claim 24, applicant claims "a substantial quantity of light". The word "substantial" is a relative and indefinite term and for this reason the claim is rejected.

Regarding claim 28, the claim doesn't positively recite the structural components of the recording/playback device, rendering the claim incomplete.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Buchschacher et al 6,052,295 (Buchschacher hereinafter).

Regarding claim 17, Buchschacher teaches an electronic circuit comprising conversion means (see Fig. 1 and col 1 lines 65-67) for converting an input voltage (U_i , col 2 line 4) into an output voltage (U_o , col 2 line 14), said conversion means comprising at least a first energy storage means (a first capacitor C_1 , col 2 line 55) and a second energy storage means (output capacitor C_{out} , col 4 line 6) and switching means (Sw_1 , Sw_2 , Sw_3 , Sw_4 and Sw_5 , Fig. 2) for periodically coupling said at least first and second energy storage means (C_1 , C_2) to one another under the control of clock signal so as to store energy in the at least first and second energy storage means (C_1 , C_2) and for transferring at least a portion of the stored energies between the at least first and second energy storage means (instead of programming the desired clock input signals the invention also makes it possible to automatically generate the desired clock input signal. For this, monitoring means must be coupled between the output OP of the voltage converter and an input of the means, col 2 lines 31-36), and clock signal generating means for generating the clock signals, said control signal generating means keeping the clock signals in holding states during a holding period during operation, said holding states being equal to the state of the respective clock signal immediately before the holding state (The clock signals can be programmed to a part of the voltage multiplier to a non-active state, see Abstract).

Regarding claim 18, Buchschacher teaches the electronic circuit as claimed in claim 17, characterized in that the switching means and the at least first and second

Art Unit: 2627

energy storage means are implemented with the use of at least one charge pump (CHGMP1 - CHGMP4, col 2 lines 45-65).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 19 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buchschacher in view of Lenssen et al. 6,986,151 B2 (Lenssen hereinafter).

Regarding claim 19, Buchschacher teaches an integrated circuit (IC) that comprises an electronic circuit as defined in claim 17 but fails to teach a medium for storage/reading of user information, comprising an integrated circuit (IC) that comprises an electronic circuit. However, Lenssen teaches an information carrier provided with a storage unit, an integrated circuit and a coupling element (col 1 lines 4-5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the electronic circuit of Buchschacher to make it usable on storage/reading medium as thought by Lenssen. The modification would have been obvious because of the benefit of storing data and energy as taught by Lenssen (col 1 line 64).

Re claim 26, Lenssen teaches the medium as claimed in claim 19, characterized in that the medium is an optical disc having a side for storing and reading the user

information, wherein the integrated circuit is fastened to said side of the optical disc in a region not reserved for storing and reading of the user information (see 10, Fig. 1).

Regarding claim 27, Lenssen teaches the medium as claimed in claim 19, characterized in that the medium is an optical disc having a first side for storing and reading of the user information, wherein the integrated circuit is fastened to a second side of the optical disc (see 10, Fig. 3).

Regarding claim 28, Lenssen teaches a recording/playback device for storage/reading of information onto/from the medium as claimed in claim 19 (apparatus 40, Fig. 7).

8. Claims 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buchschacher in view of Lenssen and further in view of Dierschke et al. 5,567,976 (Dierschke hereinafter).

Regarding claim 20, Buchschacher teaches providing the input voltage (U_i) from the voltage source and Lenssen teaches an information carrier provided with a storage unit, an integrated circuit and a coupling element but both Buchschacher and Lenssen fail to teach a medium as claimed in claim 19, characterized in that the integrated circuit (IC) comprises a photosensitive sensor (SNS) for providing the input voltage (U_i) when the sensor (SNS) receives a substantial quantity of light. However, the use of photosensitive sensors in ICs is well known in the art, and as an example Dierschke teaches integrated circuits including photosensitive sensors.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the electronic circuit of Buchschacher to have a photosensitive sensor thereby to control the input voltage based on the quantity of light. The modification would have been obvious because of the benefit of photosensitive sensors not only for position sensing but also light sensing and voltage controlling.

Regarding claim 21, Lenssen teach the medium as claimed in claim 20, characterized in that the integrated circuit (IC) furthermore comprises memory means (MM) provided with a supply voltage through utilization of the output voltage (one IC comprising an electrically programmable memory and the other IC a preprogrammed memory, col 3 line 40).

Regarding claim 22, Lenssen teaches the medium as claimed in claim 21, characterized in that the integrated circuit further comprises a microprocessor, said microprocessor processing the additional information, and said microprocessor being coupled to the memory means for storing the processed additional information (the IC comprises a micro-processor by means of which algorithms can be carried out, and a memory, col 3 lines 25-27) but fails to teach a photosensitive sensor for providing additional information to the microprocessor. However, the use of photosensitive sensors in ICs is well known in the art, and as an example Dierschke teaches integrated circuits including photosensitive sensors.

Regarding claim 23, Lenssen teaches the medium as claimed in claim 21, characterized in that the integrated circuit further comprises a microprocessor, and in

that the microprocessor being coupled to the memory means for processing the additional information after reading of the additional information from the memory means (the IC comprises a micro-processor by means of which algorithms can be carried out, and a memory, col 3 lines 25-27) but fails to teach a photosensitive sensor for providing additional information to the memory means for the storage of the additional information. However, the use of photosensitive sensors in ICs is well known in the art, and as an example Dierschke teaches integrated circuits including photosensitive sensors.

9. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buchschacher in view of Lenssen and Dierschke as applied to claim 4 above, and further in view of Miyagi et al. 5955687 (Miyagi hereinafter).

Regarding claim 24, Buchschacher, Lenssen and Dierschke teach the medium as claimed in claim 22, but all three references individually or combined fail to teach that the medium is characterized in that the length of the holding period corresponds by approximation to that of a time period during which the photosensitive sensor does not receive a substantial quantity of light. However, Miyagi teaches light sensor which outputs a voltage or a current signal corresponding to the variable quantity of received light (col 15 lines 43-45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the medium taught by Buchschacher, Lenssen and Dierschke to be able to control the holding period using a photosensitive sensor that regulated voltage

based on the amount of light received. The modification would have been obvious for the benefit of outputting voltage corresponding to the amount of light received as taught by Miyagi.

Re claim 25, Lenssen teaches the medium as claimed in claim 24, with a microprocessor and it is fairly obvious for one skilled in the art the microprocessor would be idle during the holding period and Buchschacher teaches that the integrated circuit further comprises a standby circuit for supplying the microprocessor with a supply voltage during the holding period (RT) by activating selected ones from the plurality of the voltage multipliers (col 1 lines 27-30).

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HENOK G. HEYI whose telephone number is (571)270-1816. The examiner can normally be reached on Monday to Friday 8:30 to 6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2627

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Henok G Heyi/
Examiner, Art Unit 2627

/Peter Vincent Agustin/
Patent Examiner, Art Unit 2627